

**MICHIGAN DEPARTMENT OF CIVIL SERVICE**  
**JOB SPECIFICATION**

**SOIL SCIENTIST**

**JOB DESCRIPTION**

Employees in this job complete and oversee a variety of professional assignments involving the survey, classification, and mapping of soils throughout the state.

There are four classifications in this job.

**Position Code Title – Soil Scientist-E**

Soil Scientist 9

This is the entry level. The employee carries out a range of professional soil scientist assignments while learning the methods of the work.

Soil Scientist 10

This is the intermediate level. The employee performs an expanding range of professional soil scientist assignments in a developing capacity.

Soil Scientist P11

This is the experienced level. The employee performs a full range of professional soil scientist assignments in a full functioning capacity. Considerable independent judgement is used to make decisions in carrying out assignments that have significant impact on services or programs. Guidelines may be available, but require adaptation or interpretation to determine appropriate courses of action.

**Position Code Title – Soil Scientist-A**

Soil Scientist 12

This is the advanced level. The employee may function as a lead worker or senior worker. At this level, employees are responsible for overseeing the work assignments of other professionals or have regular assignments, which have been recognized by Civil Service as having significantly greater complexity than those assigned at the experienced level in the series.

**NOTE:** Employees generally progress through this series to the experienced-level based on satisfactory performance and possession of the required experience.

**JOB DUTIES**

**NOTE:** The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

## **SOIL SCIENTIST**

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Examines, identifies and classifies soils and determines their characteristics.

Walks the land, studies aerial photography, takes and evaluates soil borings and makes visual observations regarding the slope and other topographical features; records data and observations on field survey sheets.

Makes field tests for pH and other factors.

Gathers support information such as land use and crop data, and acre estimates of mapping units.

Delineates areas of different types of soils and land conditions.

Records field data and interpretations on aerial photos.

Coordinates data into final survey form.

Prepares and uses drafts and final soil survey maps of unit descriptions; correlates data with location.

Maintains records and prepares reports and correspondence related to the work.

May perform related essential functions appropriate to the class and other non-essential functions as required.

### **Additional Job Duties**

#### **Soil Scientist 12 (Lead Worker)**

Oversees the work of professional staff by making and reviewing work assignments, establishing priorities, coordinating activities, and resolving related work problems.

#### **Soil Scientist 12 (Senior Worker)**

Performs on a regular basis professional soil scientist assignments, which are recognized by Civil Service as more complex than those assigned at the experienced level.

### **JOB QUALIFICATIONS**

#### **Knowledge, Skills, and Abilities**

**NOTE:** Some knowledge in the area listed is required at the entry level, developing knowledge is necessary at the intermediate level, considerable knowledge is required at the experienced level, and thorough knowledge is required at the advanced level.

Knowledge of the principles and practices of soil science.

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Knowledge of the standard soil classification system.

Knowledge of chemistry, physics, and mapping techniques related to the work.

Knowledge of the equipment used in conducting soil surveys.

Knowledge of soil survey operations and procedures.

Ability to apply the principles and practices of soil science.

Ability to recognize aerial photographic patterns and relate same to significant soil features.

Ability to prepare technical descriptions of individual soil pedons and mapping units.

Ability to interpret and record visual observations.

Ability to maintain records, and prepare reports and correspondence related to the work.

Ability to communicate effectively with others.

Ability to maintain favorable public relations.

### **Additional Knowledge, Skills, and Abilities**

#### **Soil Scientist 12 (Lead Worker)**

Ability to organize and coordinate the work of others.

Ability to set priorities and assign work to other professionals.

### **Working Conditions**

Some jobs require an employee to work outdoors as well as in an office or a laboratory.

### **Physical Requirements**

The job duties require an employee to move heavy objects.

The job duties require an employee to traverse rough terrain.

### **Education**

Possession of a bachelor's degree in soil science.

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### **Experience**

#### **Soil Scientist 9**

No specific amount or type is required.

#### **Soil Scientist 10**

One year of professional experience in the survey, classification and mapping of soils equivalent to a Soil Scientist in state service.

#### **Soil Scientist P11**

Two years of professional experience in the survey, classification and mapping of soils equivalent to a Soil Scientist in state service, including one year equivalent to an intermediate level Soil Scientist.

#### **Soil Scientist 12**

Three years of professional experience in the survey, classification and mapping of soils, including one year of experience equivalent to a Soil Scientist P11.

### **Special Requirements, Licenses, and Certifications**

None.

**NOTE:** Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

### **JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION**

#### **Job Code**

SOILSCI

#### **Job Code Description**

Social Scientist

#### **Position Title**

Social Scientist-E

Social Scientist-A

#### **Position Code**

SOILSCIE

SOILSCIA

#### **Pay Schedule**

H21-001

H21-009